

EXHIBIT A

1. (Previously presented) A method for making a magnetic recording medium comprising the steps of:

depositing a first carbon layer on said recording medium, said first carbon layer comprising predominantly SP3 carbon;

depositing a second carbon layer on said recording medium, said second carbon layer comprising about 60% or less SP3 carbon, the SP3 content of the second carbon layer being less than the SP3 content of the first carbon layer, said second carbon layer being amorphous; and

depositing a lubricant layer on said second carbon layer.

2. (Original) Method of claim 1 wherein the second carbon layer comprises less than about 50% SP3 carbon.

3. (Original) Method of claim 2 wherein the second carbon layer comprises more than about 30% SP3 carbon.

4. (Original) Method of claim 1 wherein said second carbon layer has a thickness less than or equal to about 1 nm.

5. (Original) Method of claim 1 wherein said second carbon layer is between 0.1 and 1 nm thick.

6. (Canceled)

7. (Original) Method of claim 1 wherein the second carbon layer is formed by sputtering and the first carbon layer is formed by CVD, PECVD, IBD or cathodic arc deposition.

8. (Original) Method of claim 1 wherein the first and second carbon layers are formed by sputtering.

9. (Original) Method of claim 8 wherein said depositing of said first carbon layer comprises:

applying a voltage to a sputtering target, said sputtering target comprising carbon, said voltage being applied by a power supply in the form of pulses, said pulses comprising at least a first portion and a second portion, the voltage applied during said second portion being more negative than that applied during said first portion, wherein a first sub-portion of said second portion is more negative than a second sub-portion of said second portion.

10. (Previously presented) A magnetic recording medium comprising:

a substrate;

a magnetic layer formed on said substrate;

a first carbon layer formed on said magnetic layer, said first carbon layer comprising predominantly SP³ carbon;

a second carbon layer formed on said first carbon layer, said second carbon layer comprising about 60% or less SP³ carbon, the SP³ content of said second carbon layer being less than the SP³ content of the first carbon layer; and

a lubricant layer on said second carbon layer.

11. (Previously presented) Recording medium of claim 10 wherein the second carbon layer comprises less than 50% SP³ carbon.

12. (Previously presented) Recording medium of claim 10 wherein said second carbon layer is a flash carbon layer.

13. (Currently amended) Recording medium of claim ~~[[13]]~~ 10 wherein said second carbon layer is between 0.1 and 1.0 nm thick.

14-41. (Canceled)

42. (Previously presented) Recording medium of claim 10 wherein said first carbon layer is less than 5 nm thick and said second carbon layer is less than 1 nm thick.

43. (Previously presented) Recording medium of claim 10 wherein said first carbon layer comprises 70% or greater SP³ bonding.

44. (Previously presented) Recording medium of claim 10 wherein said first carbon layer comprises about 80% or greater SP3 bonding.
45. (Previously presented) Recording medium of claim 10 wherein said first carbon layer has a density greater than about 2.1 grams/cc.
46. (Previously presented) Recording medium of claim 10 wherein said first carbon layer has a refractive index greater than 2.0.
47. (Canceled)
48. (Previously presented) A magnetic recording medium comprising:
- a substrate;
 - a magnetic layer formed on said substrate;
 - a first carbon layer formed on said magnetic layer, said first carbon layer being formed by sputtering during which a voltage is applied to a sputtering target, said sputtering target comprising carbon, said voltage being applied by a power supply in the form of pulses, said pulses comprising at least a first portion and a second portion, the voltage applied during the second portion being more negative than that applied during the first portion, wherein a first sub-portion of said second portion is more negative than a second subportion of said second portion;

a second carbon layer formed on said first carbon layer, said second carbon layer comprising about 60% or less SP³ carbon, the SP³ content of said second carbon layer being less than the SP³ content of the first carbon layer; and

a lubricant layer on said second carbon layer.

49. (Previously presented) Recording medium of claim 48 wherein said first carbon layer is less than 5 nm thick and said second carbon layer is less than 1 nm thick.

50. (Previously presented) Recording medium of claim 48 wherein said first carbon layer comprises about 70% or greater SP³ bonding.

51. (Previously presented) Recording medium of claim 48 wherein said first carbon layer comprises 80% or greater SP³ bonding.

52. (Previously presented) Recording medium of claim 48 wherein said first carbon layer has a density greater than about 2.1 grams/cc.

53. (Previously presented) Recording medium of claim 48 wherein said first carbon layer has a refractive index greater than 2.0.

54. (Canceled)

55. (Previously presented) Recording medium of claim 10 wherein said first carbon layer is substantially thicker than said second carbon layer.
56. (Previously presented) Recording medium of claim 48 wherein said first carbon layer is substantially thicker than said second carbon layer.
57. (Previously presented) Recording medium of claim 10 wherein the first carbon layer has a lower surface energy than the second carbon layer.
58. (Previously presented) Recording medium of claim 48 wherein the first carbon layer has a lower surface energy than the second carbon layer.
59. (Previously presented) Recording medium of claim 10 further comprising an underlayer formed between said substrate and said magnetic layer.
60. (Previously presented) Recording medium of claim 48 further comprising an underlayer formed between said substrate and said magnetic layer.
61. (New) Method of claim 1 wherein the surface of said medium is textured.
62. (New) Medium of claim 10 wherein the surface of said medium is textured.
63. (New) Medium of claim 48 wherein the surface of said medium is textured.